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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,929	11/21/2003	John M. Forsythe	1957-6012.1US	4005

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EXAMINER	
HYUN, PAUL SANG HWA	
ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
06/24/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOMail@traskbritt.com

Office Action Summary	Application No.	Applicant(s)	
	10/719,929	FORSYTHE ET AL.	
	Examiner	Art Unit	
	PAUL S. HYUN	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9-13 and 15-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9-13 and 15-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 2, 2010 has been entered.

Claims 1, 3-7, 9-13 and 15-21 remain pending. Applicant amended claims 1 and 12.

The amendment to the Specification to add information regarding related applications has been acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims **1, 3-7, 9-13 and 15-21** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The originally filed Specification does not provide support for the amendment made to claims 1 and 12. Specifically, the amendment recites limitations directed toward determining the amount of sprout inhibitor present on the surface of a crop sample per mass of the sample. According to the amendment, said amount is determined by

1) calculating a crop surface area multiplier by dividing a total surface area of the crop by a surface area of the crop;

2) dividing said crop surface area multiplier by a total mass of the crop to obtain a crop surface area ratio; and

3) multiplying the measured amount of sprout inhibiting chemical, the crop surface area ratio, and the calibration ratio to determine the amount of sprout inhibitor present on the surface of the crop per mass of the crop.

Although the originally filed Specification discloses a method of determining the amount of sprout inhibitor present on a crop sample per mass of the crop sample, the Specification does not disclose a method of determining this value in the manner specified in the claims.

First, the Specification does not provide support for a step of determining the claimed crop surface area multiplier. The Specification is silent with respect to such a multiplier. The Specification is silent with respect to a ratio other than a calibration ratio.

Similarly, the Specification does not provide support for a step of determining the claimed crop surface area ratio. Again, the Specification is silent with respect to a ratio other than a calibration ratio.

Lastly, the Specification does not provide support for a step of multiplying the crop surface area ratio with other values to determine the amount of sprout inhibitor present on the surface of the crop per mass of the crop. Again, the Specification is silent with respect to the claimed crop surface area ratio, including any mathematical calculations involving the crop surface area ratio.

For examination purposes, any method that results in a determination of the amount of chemical present per mass of sample will be deemed to be within the scope of the claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims **1, 3-7, 9-13 and 15-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wohleb (US 2005/0059162 A1) in view of Anton et al. (US 2001/0053517 A1), Gordon et al. (US 5,958,714) and Scher (US 4,714,614).

Wohleb discloses a kit and a method for quantitatively analyzing chemicals present in soil and water (see Abstract and [0006]). The kit comprises a sorption vial 20 having a sorbent material 27 disposed therein for extracting a chemical of interest (see Fig. 3). In operation, a sample (e.g. soil, liquid) is placed inside vial 20 to expose the sorbent material to the sample. Once the analyte of interest is collected in the sorbent material, an extraction solution is added to the sorption vial (if the sample is solid) and the vial is sealed. The vial containing the extracted chemical of interest is then transferred to a lab for further analysis (see Abstract) by gas chromatography (see

[0054]). Because the sample is subjected to gas chromatography, the sample can be quantitatively analyzed. The method disclosed by Wohleb differs from the claimed invention in that Wohleb does not disclose the use of an internal standard. Wohleb also does not disclose that the sample can be crops such as tubers collected at a crop storage facility for determining the concentration of sprout inhibiting chemicals present on the surface of the tubers. Lastly, Wohleb does not disclose the step of expressing the concentration of the measured chemical with respect to the mass of the sample.

With respect to the internal standard, Anton et al. disclose a kit for collecting and analyzing an unknown sample. The kit comprises a known quantity of internal standard that is used to "spike" the sample. The internal standard is used to determine the natural degradation of the sample from the time the sample is collected and the sample is analyzed based on the natural degradation of the internal standard over that same span of time (see [0007]). This is accomplished by obtaining the ratio of the quantity of the internal standard at the time of sample analysis and the known initial quantity of internal standard at the time the sample is collected (see [0022]). In light of the disclosure of Anton et al., it would have been obvious to one of ordinary skill in the art to provide the kit disclosed by Wohleb with an internal standard to account for the natural degradation of the sample while the sample is transported from the sample collection site to the laboratory.

With respect to the crop samples, Gordon et al. disclose that many types of chemical contaminants, such as herbicides, are present in foods (see lines 60-65, col. 4). The reference identifies the need to analyze food samples to determine the extent of

the contamination of the crops that humans consume (see Abstract and lines 50-55, col. 18). Specifically, Gordon et al. disclose the steps of acquiring a small portion of a sample (e.g. chopped food) (see lines 60-65, col. 20) and subjecting the sample to various extraction processes to isolate the deleterious chemical of interest. In light of the disclosure of Gordon et al., and given that the method disclosed by Wohleb is directed towards the analysis of contaminants present in samples that are consumed by humans (i.e. soil and water), it would have been obvious to one of ordinary skill in the art to collect tuber samples from a crop storage location and apply the test disclosed by Wohleb to determine the concentration of herbicides present in the tuber samples. Likewise, it would have been obvious to rinse the tuber sample prior to analysis to remove dirt and other analytes of non-interest. Lastly, it would have been obvious to analyze only a section of the tuber (i.e. core sample) to minimize the time and reagents used for the analysis.

With respect to expressing the concentration of the detected herbicide with respect to the mass of the sample, Scher discloses a method for determining the impact that various chemicals found in the soil have on plants. Scher expresses the concentration of the chemicals in terms of the ppm of said chemical per gram of soil (see Tables I and II, column 9). Given that it is well known in the art to express the impact of deleterious chemicals in terms of ppm per mass of sample, it would have been obvious to one of ordinary skill in the art to express the amount of herbicide measured using the modified Wohleb method with respect to the mass of the crop sample from which the herbicide is collected.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but they are moot in view of the new grounds of rejection. Nonetheless, some of Applicant's arguments that remain pertinent will be addressed.

Applicant argues that the claims are patentable over the disclosure of the cited references because none of the references disclose the step of comparing the amount of internal standard present at the time of collection and the amount of internal standard present at the time of analysis to obtain a calibration ratio. This argument is not persuasive because Anton et al. disclose this step. As indicated in the rejection above, Anton et al. disclose the use of an internal standard to determine the natural degradation of the sample from the time the sample is collected and the sample is analyzed. This is accomplished by obtaining the ratio (i.e. the claimed calibration ratio) of the quantity of the internal standard at the time of sample analysis and the known initial quantity of internal standard at the time of collection and applying this rate of degradation to the sample being analyzed. This is the very purpose that the claimed internal standard and the claimed calibration ratio is intended to serve. For the foregoing reason, Applicant's argument that the claims are patentable because Anton et al. do not disclose the step of comparing the amount of internal standard at the time of sample collection and the amount of internal standard at the time of analysis to obtain a calibration ratio is not persuasive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL S. HYUN whose telephone number is (571)272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul S Hyun/
Examiner, Art Unit 1797

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797